

ABSTRACT

The hologram (20) for spherical aberration correction is formed in optical element (10). With respect to the first laser light which requires the largest effective diameter, the hologram does not have effect on wavefront. With respect to the second laser light which requires the second largest effective diameter, the spherical aberration is corrected by the holograms (21, 22) which are formed in a concentric and zonal pattern and construct the hologram, and the effective diameter is converged. With respect to the third laser light which requires the smallest effective diameter, only the hologram (22) has the effect of the correction for the spherical aberration. The hologram (22) is formed such that its diameter is associated with the effective diameter required by the third laser light, and the effective diameter is converged due to the combination with the incidence of the diffused laser light